CLAIMS:

What is claimed is:

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1.   A method of making purchasing decisions for purchasing a product or service, comprising:

obtaining one or more rules identifying strategic purchasing policies;

obtaining one or more attributes for the product or service to be purchased;

10   and

automatically making a decision to purchase the product or service from a vendor based on the one or more rules and the one or more attributes.

2.   The method of claim 1, wherein the one or more rules include one or more

15   rules directed to at least one of an identification of the types of products or services that are to be purchased over a specified period of time, preferred terms and conditions of purchases, preferred shipping or delivery policies, desired expiration times on orders, target purchase prices, thresholds for maximum purchase prices, target values for product/service or vendor quality metrics, rank orderings or relative weights for

20   calculating tradeoffs among different product/service or vendor attributes, sets of products or services that may be substituted for each other, default policies for product returns, rank ordered or weighted lists of preferred vendors, preferred payment methods, and parameters used in automated price calculation algorithms.

25   3.   The method of claim 1, wherein the one or more attributes includes at least one of a maximum price to be paid for the product or service, a maximum number of products for purchase, sets of products or services that may be substituted for each other, information about which sets of products or services are preferred, information such as rank orderings or weights for determining tradeoffs among imperfectly

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substitutable products or services, information for determining tradeoffs between product or service prices, order size, and delivery times, information for determining tradeoffs between product or service prices and vendor preferences, and thresholds for minimum acceptable quality measures.

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4.   The method of claim 1, wherein the product or service is associated with a multi-attribute utility function that describes an interrelation between multiple attributes of the one or more attributes.

10   5.   The method of claim 1, wherein the one or more attributes are dynamically set.

6.   The method of claim 1, wherein the one or more attributes are fixed.

7.   The method of claim 1, wherein at least one of the one or more attributes is
15   dynamically set and at least one of the one or more attributes is fixed.

8.   The method of claim 1, wherein a value of at least one of the one or more attributes is automatically set.

20   9.   The method of claim 1, wherein automatically making a decision to purchase the product or service from a vendor includes:

automatically selecting a set of vendors from which the product or service may be purchased;

automatically evaluating each vendor in the set of vendors; and
25   automatically choosing a vendor from the set of vendors from which to purchase the product or service.

10.   The method of claim 9, wherein automatically selecting a set of vendors includes:

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obtaining history information regarding one or more vendors; and

selecting the set of vendors from the one or more vendors based on the history information.

5   11.   The method of claim 10, wherein the history information includes at least one of a previous history of purchases from the vendor, a negotiation history with the vendor, and a fulfillment history with the vendor.

12.   The method of claim 9, wherein automatically selecting a set of vendors
10   includes:

obtaining exogenous preference information for one or more vendors; and

selecting the set of vendors from the one or more vendors based on the exogenous preference information.

15   13.   The method of claim 12, wherein the exogenous preference information includes at least one of identification information of vendors to prefer, identification information of vendors to avoid, a rank ordering of vendors, and a rank ordering of vendors to prefer for the product or service.

20   14.   The method of claim 9, wherein automatically selecting a set of vendors includes:

obtaining interoperability mechanism information for one or more vendors; and

selecting the set of vendors from the one or more vendors based on the interoperability mechanism information.

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15.   The method of claim 9, wherein automatically selecting a set of vendors includes:

obtaining information about one or more vendors from a third party; and

selecting the set of vendors from the one or more vendors based on the information obtained from the third party.

16. The method of claim 9, wherein automatically evaluating each vendor in the set
5   of vendors includes negotiating with each vendor for the purchase of the product or service based on the one or more rules and the one or more attributes of the product or service.

17. The method of claim 16, wherein negotiating with each vendor includes at least
10   one of selecting vendors by comparing prices in vendor on-line catalogs with a maximum price attribute for the product or service, placing one or more bids in an auction, and haggling over terms of the purchase.

18. The method of claim 16, wherein negotiating with each vendor includes
15   negotiating based on one or more negotiation parameters including at least one of:

a threshold on a maximum price to offer;

parameters of algorithms used to calculate the maximum price to offer;

thresholds on minimum acceptable quality;

how long before an end of an auction to stop attempts at obtaining a better deal;

20   preferred increments in price when making counteroffers;

preferences, weights, or rank orderings for evaluating tradeoffs among alternatives among substitutable products, product attributes, terms and conditions, delivery times or costs, and vendor attributes;

tunable parameters of algorithms used in calculating offers;

25   rank orderings of preferred algorithms to use with particular vendors; and

information about which negotiation protocols are supported by each vendor in the set of vendors.

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19.   The method of claim 1, further comprising:

storing a record of the purchase.

20.   The method of claim 1, wherein the method is implemented in a distributed

5   data processing system.

21.   A computer program product in a computer readable medium for making

purchasing decisions for purchasing a product or service, comprising:

first instructions for obtaining one or more rules identifying strategic

10   purchasing policies;

second instructions for obtaining one or more attributes for the product or

service to be purchased; and

third instructions for automatically making a decision to purchase the product

or service from a vendor based on the one or more rules and the one or more

15   attributes.

22.   The computer program product of claim 21, wherein the one or more rules

include one or more rules directed to at least one of an identification of the types of

products or services that are to be purchased over a specified period of time, preferred

20   terms and conditions of purchases, preferred shipping or delivery policies, desired

expiration times on orders, target purchase prices, thresholds for maximum purchase

prices, target values for product/service or vendor quality metrics, rank orderings or

relative weights for calculating tradeoffs among different product/service or vendor

attributes, sets of products or services that may be substituted for each other, default

25   policies for product returns, rank ordered or weighted lists of preferred vendors,

preferred payment methods, and parameters used in automated price calculation

algorithms.

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23.   The computer program product of claim 21, wherein the one or more attributes includes at least one of a maximum price to be paid for the product or service, a maximum number of products for purchase, sets of products or services that may be substituted for each other, information about which sets of products or services are preferred, information such as rank orderings or weights for determining tradeoffs among imperfectly substitutable products or services, information for determining tradeoffs between product or service prices, order size, and delivery times, information for determining tradeoffs between product or service prices and vendor preferences, and thresholds for minimum acceptable quality measures.

24.   The computer program product of claim 21, wherein the product or service is associated with a multi-attribute utility function that describes an interrelation between multiple attributes of the one or more attributes.

25.   The computer program product of claim 21, wherein the one or more attributes are dynamically set.

26.   The computer program product of claim 21, wherein the one or more attributes are fixed.

27.   The computer program product of claim 21, wherein at least one of the one or more attributes is dynamically set and at least one of the one or more attributes is fixed.

28.   The computer program product of claim 21, wherein a value of at least one of the one or more attributes is automatically set.

29.   The computer program product of claim 21, wherein the third instructions for automatically making a decision to purchase the product or service from a vendor include:

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instructions for automatically selecting a set of vendors from which the product or service may be purchased;

instructions for automatically evaluating each vendor in the set of vendors; and

instructions for automatically choosing a vendor from the set of vendors from 5 which to purchase the product or service.

30. The computer program product of claim 29, wherein the instructions for automatically selecting a set of vendors include:

instructions for obtaining history information regarding one or more vendors; 10 and

instructions for selecting the set of vendors from the one or more vendors based on the history information.

31. The computer program product of claim 30, wherein the history information 15 includes at least one of a previous history of purchases from the vendor, a negotiation history with the vendor, and a fulfillment history with the vendor.

32. The computer program product of claim 29, wherein the instructions for automatically selecting a set of vendors include:

20 instructions for obtaining exogenous preference information for one or more vendors; and

instructions for selecting the set of vendors from the one or more vendors based on the exogenous preference information.

25 33. The computer program product of claim 32, wherein the exogenous preference information includes at least one of identification information of vendors to prefer, identification information of vendors to avoid, a rank ordering of vendors, and a rank ordering of vendors to prefer for the product or service.

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34.   The computer program product of claim 29, wherein the instructions for automatically selecting a set of vendors include:

instructions for obtaining interoperability mechanism information for one or more vendors; and

5   instructions for selecting the set of vendors from the one or more vendors based on the interoperability mechanism information.

35.   The computer program product of claim 29, wherein the instructions for automatically selecting a set of vendors include:

10   instructions for obtaining information about one or more vendors from a third party; and

instructions for selecting the set of vendors from the one or more vendors based on the information obtained from the third party.

15   36.   The computer program product of claim 29, wherein the instructions for automatically evaluating each vendor in the set of vendors include instructions for negotiating with each vendor for the purchase of the product or service based on the one or more rules and the one or more attributes of the product or service.

20   37.   The computer program product of claim 36, wherein the instructions for negotiating with each vendor includes at least one of instructions for selecting vendors by comparing prices in vendor on-line catalogs with a maximum price attribute for the product or service, instructions for placing one or more bids in an auction, and instructions for haggling over terms of the purchase.

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38.   The computer program product of claim 36, wherein the instructions for negotiating with each vendor include instructions for negotiating based on one or more negotiation parameters including at least one of:

a threshold on a maximum price to offer;

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parameters of algorithms used to calculate the maximum price to offer;

thresholds on minimum acceptable quality;

how long before an end of an auction to stop attempts at obtaining a better deal;

preferred increments in price when making counteroffers;

5 preferences, weights, or rank orderings for evaluating tradeoffs among alternatives among substitutable products, product attributes, terms and conditions, delivery times or costs, and vendor attributes;

tunable parameters of algorithms used in calculating offers;

rank orderings of preferred algorithms to use with particular vendors; and

10 information about which negotiation protocols are supported by each vendor in the set of vendors.

39. The computer program product of claim 21, further comprising:

fourth instructions for storing a record of the purchase.

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40. The computer program product of claim 21, wherein the computer program product is executed in a distributed data processing system.

41. An apparatus for making purchasing decisions for purchasing a product or
20 service, comprising:

a first storage device for storing one or more rules identifying strategic purchasing policies;

a second storage device for storing one or more attributes for the product or service to be purchased; and

25 a controller coupled to the first storage device and the second storage device, wherein the controller automatically makes a decision to purchase the product or service from a vendor based on the one or more rules and the one or more attributes.

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42. The apparatus of claim 41, wherein the controller automatically makes a decision to purchase the product or service from a vendor by:

automatically selecting a set of vendors from which the product or service may be purchased;

5   automatically evaluating each vendor in the set of vendors; and

automatically choosing a vendor from the set of vendors from which to purchase the product or service.

43. The apparatus of claim 42, wherein the controller automatically selects a set of
10 vendors by:

obtaining history information regarding one or more vendors using a data collection device; and

selecting the set of vendors from the one or more vendors based on the history information using a vendor selection device.

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44. The apparatus of claim 42, wherein the controller automatically selects a set of vendors by:

obtaining exogenous preference information for one or more vendors using a data collection device; and

20   selecting the set of vendors from the one or more vendors based on the exogenous preference information using a vendor selection device.

45. The apparatus of claim 42, wherein the controller automatically selects a set of vendors by:

25   obtaining interoperability mechanism information for one or more vendors using a data collection device; and

selecting the set of vendors from the one or more vendors based on the interoperability mechanism information using a vendor selection device.

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46.   The apparatus of claim 42, wherein the controller automatically selects a set of vendors by:

        obtaining information about one or more vendors from a third party using a data collection device; and

5   selecting the set of vendors from the one or more vendors based on the information obtained from the third party a vendor selection device.

47.   The apparatus of claim 42, wherein the controller automatically evaluates each vendor in the set of vendors by negotiating with each vendor for the purchase of the

10   product or service based on the one or more rules and the one or more attributes of the product or service using a negotiation engine.

48.   The apparatus of claim 41, further comprising:

        a transaction record storage device for storing a record of the purchase.

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